

DEPARTMENT OF FOOD AND AGRICULTURE
1220 N Street, Room A-114
Sacramento, CA 95814

A.G. KAWAMURA, Secretary



Milk and Dairy Food Safety Branch

Title 3, California Code of Regulations Chapter 1, Division 2

Various Changes to Articles 13, 14, 14.5, 14.6, 14.7, 14.8, and 21

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Article 13. Personal Examinations and Licenses

Section 498. Pasteurizer's Examination and License.

(a) Any person desiring to obtain a pasteurizer's license as required by section 35168 of the Food and Agricultural Code shall comply with all of the following requirements:

(1) File an application with the Department on the Pasteurizer's License Application, Form No. 72-255 (Rev. 7/05), which is incorporated by reference, accompanied by the applicable fee for the license pursuant to Food and Agricultural Code section 35231. The fee is non-refundable and covers Departmental costs of administering the examination.

(2) Obtain a grade of at least 80 percent on a written examination, and obtain a grade of at least 80 percent on an oral and practical examination to demonstrate the ability of the applicant to properly pasteurize milk or its products.

(b) Each licensed pasteurizer shall keep their current license displayed at all times at the facility where they are employed.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 35161, 35162, 35163, 35164, 35166, 35167, 35168, 35170, 35171 and 35231, Food and Agricultural Code.

Section 499. Tester's Examination and License.

(a) Any person desiring to obtain a tester's license as required by section 35161 of the Food and Agricultural Code shall comply with all of the following requirements:

(1) File an application with the Department on the Tester's License Application, Form No. 72-202 (Rev. 11/05), which is incorporated by reference, accompanied by the applicable fee for the license pursuant to Food and Agricultural Code section 35231. The fee is non-refundable and covers Departmental costs of administering the examination. Each applicant shall specify the milk and cream testing method to be used and for which the license is desired.

(2) Obtain a grade of at least 80 percent on a written examination, and obtain a grade of at least 80 percent on an oral and practical examination to demonstrate the ability of the applicant to conduct accurate tests on milk and cream. The examination shall be adapted to the particular method of testing specified in the application.

(b) The license, if issued, shall specify the method to be used by the licensee (i.e. Babcock, Mojonnier, InfraRed, Direct Forced Air Oven Drying, etc.) and shall not be construed

to permit tests to be made by the applicant using any other method than that specified in the license. Testers may be licensed to perform each of the official final action methods of analysis listed in section 32921 of the Food and Agricultural Code and/or approved testing methods of comparable accuracy listed in section 511.

(c) A licensed tester shall at all times comply with all laws, rules, and regulations governing the testing of milk or cream purchased, received, or sold on the basis of the compositional components contained therein by any method or process, and must secure accurate results.

(d) Each licensed tester shall keep their current license displayed at the facility where they are employed.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921, 34261.5, 35161, 35162, 35163, 35164, 35166, 35167, 35168, 35170, 35171 and 35231, Food and Agricultural Code.

Section 499.5 Butter Grader's Examination and License.

(a) Any person desiring to obtain a butter grader's license as required by section 35134 of the Food and Agricultural Code shall comply with all of the following requirements:

(1) File an application with the Department on the Butter Grader's License Application, Form No. 72-267 (Est. 7/05), which is incorporated by reference, accompanied by the applicable fee for the license pursuant to Food and Agricultural Code section 35231. The fee is non-refundable and covers Departmental costs of administering the examination.

(2) Obtain a grade of at least 80 percent on a written examination, and obtain a grade of at least 80 percent on an oral and practical examination to demonstrate the ability of the applicant to properly grade butter.

(b) Each licensed butter grader shall keep their current license displayed at all times at the facility where they are employed.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921, 35134, 35135, 35161, 35162, 35163, 35164, 35166, 35167, 35168, 35171 and 351231, Food and Agricultural Code.

Section 500. Sampler's and Weigher's Examination and License.

(a) The Department shall issue a general and limited sampler's and weigher's license. The general license shall apply to persons who collect milk samples for basis for payment under section 35163 of the Food and Agricultural Code. The limited license shall apply to processing plant personnel who only collect samples of bulk raw milk for drug residue testing prior to processing under section 32761.5 of the Food and Agricultural Code.

(b) Any person desiring to obtain a sampler's and weigher's license as required by section 35163 of the Food and Agricultural Code or section 576.1(c) of Title 3 of the California Code of Regulations shall comply with all of the following requirements:

(1) File an application with the Department on the Sampler's and Weigher's License Application, Form No. 72-246 (Rev. 2/06), which is incorporated by reference, accompanied by the applicable fee for the license pursuant to Food and Agricultural Code section 35231. The fee is non-refundable and covers Departmental costs of administering the examination.

(2) Obtain a grade of at least 80 percent on a written examination specific to the type of license to be issued.

(3) A general sampler's and weigher's license applicant must, in addition to subsections (b)(1) and (2) above, obtain a grade of at least 80 percent on an oral and practical examination to demonstrate the ability of the applicant to correctly collect representative samples, make correct weights on milk and cream and properly and legibly complete a satisfactory weigh sheet. A weigh sheet shall contain all of the following essential information: full date on which the milk and cream was received; name and address of person purchasing, receiving, or selling the product weighed; name or number of the patron; net weight of the milk or cream of the delivery

or shipment; and the full name and sampler's and weigher's license number of the person who does the weighing.

(4) A limited sampler's and weigher's license applicant must, in addition to subsections (b)(1) and (2) above, obtain a grade of at least 80 percent on an oral and practical examination to demonstrate the ability of the applicant to correctly collect representative samples from a bulk milk tanker.

(c) Each general licensed sampler and weigher shall keep their current license on their person and available for inspection at all times during their work as a licensee.

(d) Each limited licensed sampler and weigher shall keep their current license displayed at all times at the facility where they are employed.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921, 35161, 35162, 35163, 35164, 35166, 35167, 35168, 35170, 35171 and 35231, Food and Agricultural Code.

Section 501. Technician's Examination and License.

(a) Any person desiring to secure a license to make bacteriological determinations upon milk or cream which determinations are to be used as a basis of payment or for determining value as required by section 35167 of the Food and Agricultural Code, shall comply with the following requirements:

(1) File an application with the Department on the Technician's License Application, Form No. 72-252 (Rev. 7/05), which is incorporated by reference, accompanied by the applicable fee for the license pursuant to Food and Agricultural Code section 35231. The fee is non-refundable and covers Departmental costs of administering the examination.

(2) Obtain a grade of at least 80 percent on a written examination, and obtain a grade of at least 80 percent on an oral and practical examination to demonstrate the ability of the applicant to conduct accurate bacterial determinations on milk and cream.

(b) Each licensed technician shall keep their current license displayed at all times at the facility where they are employed.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921, 35161, 35162, 35163, 35164, 35166, 35167, 35168, 35170, 35171 and 35231, Food and Agricultural Code.

Section 502. Standard Methods for Examination of Dairy Products.

The taking of samples and the technique followed in determining the bacterial content of milk or cream, when taken for determining value or upon which basis for payment is made, must be in a manner described in "Standard Methods for the Examination of Dairy Products", 17th Edition, of the American Public Health Association. Such samples must be representative and must be taken from the container from which the milk is sold, at least once each half month.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921, 35161, 35162, 35163, 35164, 35166, 35167 and 35168, Food and Agricultural Code.

Section 504. Bacteriological Record Sheets.

(a) The forms on which bacteria counts are kept shall be of satisfactory paper stock of suitable size, providing space for necessary information.

(b) Each sheet shall be authenticated by the signature of the licensed technician and marked with the date upon which the tests were made. All bacteria test records shall be permanently identified with the name or number of the concern for whom the tests are made. The name and address of the testing laboratory shall appear on the bacteria test record sheet.

(c) The original bacteriological record sheet shall be delivered to the management of the concern for whom the tests are made immediately upon completion of the bacterial examination.

(d) All persons holding a technician's license shall make duplicate records of the result of each test, the original to be made with indelible ink.

(e) The duplicate bacteriological record sheets shall be available at the laboratory in hard copy for no less than 30 days, in addition to any back up copies of the data. After 30 days the records may be archived to any type of removable storage media where they are to be kept for a minimum of two years.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921, 35161, 35162, 35163, 35164, 35166, 35167 and 35168, Food and Agricultural Code.

Section 505. Changing Records.

Whenever a change in the records, while still in the possession of the licensed technician, is necessary, the original entry on the records shall be marked out with a single stroke of the pen without defacing the figure and the correction noted immediately adjacent to the original entry. The change shall be identified by the initials of the technician, which are to be written on the record immediately adjacent to the correction. When necessary changes are made on the original test sheet, such changes shall be made only by the licensed technician.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921, 35161, 35162, 35163, 35164, 35166, 35167 and 35168, Food and Agricultural Code.

Article 14. Official and Approved Testing Methods and Protocols

Section 509. Official and Approved Testing Methods.

This article shall govern the official final action methods and the other acceptable methods of comparable accuracy when used to determine the components of milk, bulk milk, products of milk, or products resembling milk products, and cream when such component determinations are required as a basis for payment, or to meet a legal compositional requirement of Part 2 (commencing with section 35601) and Part 3 (commencing with section 36601), of Division 15 of the Food and Agriculture Code. The official final action methods and procedures of analyses used by laboratories operated by the Department shall be deemed to be official for all regulatory purposes.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921, 34231 and 34261.5, Food and Agricultural Code.

Section 510. Official Final Action Methods of Analysis.

Any testing for milk components that requires one or more of the tests described in section 32921 of the Food and Agricultural Code to be used as an official final action determination, shall, except where variations are approved in writing by the Department, be conducted by procedures and equipment outlined in the 18th edition of the Official Methods of Analysis of the Association of Official Analytical Chemists International, which is incorporated by reference.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921 and 34261.5, Food and Agricultural Code.

Section 511. Approved Testing Methods of Comparable Accuracy.

(a) Each of the testing methods listed in this section is approved for use as an acceptable method of analysis for the determination of the components of milk, cream, bulk milk, products of milk, or products resembling milk products and shall be conducted by procedures and equipment outlined in the 18th edition of the Official Methods of Analysis of the Association of Official Analytical Chemists International, which is incorporated by reference.

(1) Fat in Raw Milk, Babcock Method, AOAC Official Method 989.04

(2) Fat in Milk, Modified Mojonnier Ether Extraction Method, AOAC Official Method 989.05

(3) Fat in Cream, Babcock Method, AOAC Official Method 995.18

- (4) Fat in Cream, Mojonnier Ether Extraction Method, AOAC Official Method 995.19.
- (5) Fat in Cream, Roesse-Gottlieb Method, AOAC Official Method 920.111.
- (6) Solids
(Total) in Milk, By Direct Forced Air Oven Drying, AOAC Official Method 990.20.
- (7) Solids-Not-Fat in Milk, AOAC Official Method 990.21.
- (8) Fat, Lactose, Protein, and Solids in Milk, Mid-Infrared Spectroscopic Method, AOAC Official Method 972.16.
- (9) Lactose in Milk, Polarimetric Method, AOAC Official Method 896.01.
- (10) Lactose in Milk, Enzymatic Method, AOAC Official Method 984.15.
- (11) Protein in Milk, Dye Binding Method I, AOAC Official Method 967.12.
- (12) Nitrogen (Total) in Milk, Kjeldahl Method, AOAC Official Method 991.20.
- (13) Nonprotein Nitrogen in Whole Milk, Kjeldahl method, AOAC Official Method 991.21.
- (14) TCA Precipitated Protein Nitrogen Content of Milk, Kjeldahl Method, AOAC Official Method 991.22.
- (15) Protein Nitrogen Content of Milk, Indirect Kjeldahl Method, AOAC Official Method 991.23

(b) Each of the approved testing methods of comparable accuracy utilized in the testing of milk for payment purposes shall comply with the required levels of accuracy and precision outlined in section 512.2(e) of this article.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921, 34202, 34231 and 34261.5, Food and Agricultural Code.

Section 512. Testing Procedures and Equipment.

(a) Except where approved in writing by the Department, licensees making tests by the approved testing methods stated in section 511, shall use equipment and follow the methods and procedures outlined in the 18th edition of the Official Methods of Analysis of the Association of Official Analytical Chemists International (AOAC), which is incorporated by reference. In the absence of prescribed equipment, methods, and procedures in AOAC, or when the Department has documented evidence that a deviation from AOAC procedures and equipment will provide testing results that are at least as accurate and precise as results obtained under AOAC procedures, the Department may give written authorization to use other testing methods and deviations.

(b) For laboratories that test raw milk for payment by infrared (IR) instrumentation, pursuant to section 511(a)(5) of this article, the procedures and pre-calibration checks outlined in section 15.121 of "Standard Methods for the Examination of Dairy Products", 17th edition, which is incorporated by reference, must be followed. A letter requesting approval of an individual instrument for IR payment testing must be submitted to the Department, along with results of the pre-calibration checks and results of a minimum of 4 consecutive sets of IR calibration samples. All mean differences and standard deviations shall meet the established tolerances, and individual differences shall meet the tolerances with a 95% confidence interval. All data will be reviewed and approved by the Department prior to the instrument being approved for payment testing.

(c) When the Babcock method is utilized for the testing of milk and cream for fat content, the readings between lines of demarcation shall be extrapolated and reported to the nearest five one hundredths of one percent (0.05%) or less for milk and the nearest twenty-five one hundredths of one percent (0.25%) or less for cream.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921 and 34261.5, Food and Agricultural Code.

Section 512.1. Testing Equipment.

(a) All calibrated measuring devices, weights, scales, or other analytical equipment used by any licensed tester or licensed technician, with any of the official final action testing methods

or with other acceptable testing methods of comparable accuracy that are approved for use, shall be accurate, precise, in good working condition, and otherwise meet Departmental approval.

(b) All measuring glassware used for basis for payment testing shall meet or exceed the specifications for such apparatus outlined in the 18th edition of the Official Methods of Analysis of the Association of Official Analytical Chemists International, which is incorporated by reference.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921 and 34261.5, Food and Agricultural Code.

Section 512.2. Character of Work and Tolerances.

(a) "Accuracy" means the degree of agreement of individual measurements with an accepted reference value. The accepted reference value shall be the analytical result made by the Department. "Precision" means the degree of mutual agreement among individual measurements made under prescribed-like conditions.

(b) After notifying the management of any milk distributor, milk processor, dairy association, or commercial testing laboratory, the Department may obtain samples of any milk or cream previously tested by a licensed tester for the payment of any milk or cream or component of milk or cream. These samples may be tested in the Department's dairy chemistry laboratory to determine the accuracy of the licensed tester's work. The Department may request that the licensed tester retest the sample at the original testing facility by the same method as the sample was originally run, to determine the precision of the tester's work.

(c) Persons making milk component tests by any approved or final action testing methods for payment purposes shall be able to demonstrate a capability to reproduce their own original tests and be able to produce work comparable to official final action tests from duplicate samples tested by the Department's dairy chemistry laboratory within the limits outlined in subsection (e) of this section.

(d) Where analysis of milk components for payment purposes are made by infrared instrumentation, the Department will provide calibration samples to laboratories at a frequency established by mutual agreement but no less than that recommended in the instruction manual of the manufacturer of the instrument. The laboratory must demonstrate that they meet the required precision and accuracy as outlined in subsection (e) of this section.

(e)

ACCURACY AND PRECISION OF MILK TESTS
BETWEEN RETESTS AND/OR OFFICIAL LABORATORY TESTS

Component	Accuracy		Standard Deviation of the Difference (SDD)	Precision
	Mean Difference			Maximum Difference between original test & retest
	5-8	9-16		
	Tests	Tests		
	±	±		
% Milk Fat.....	0.04	0.03	0.05	0.06
% Total Solids.....	0.07	0.05	0.08	0.12
% Solids Not Fat.....	0.07	0.05	0.08	0.12
% Protein.....	0.05	0.04	0.06	0.05
% Lactose.....	0.05	0.04	0.06	0.07

(f) When a retest on individual sample of milk exceeds the maximum difference allowed in subsection (e) of this section, the retest shall be used, unless the sample is deemed to be unsuitable for testing due to oiling off, churning, water in the sample, or other sample anomaly, in which case the application of the averaging procedures in section 525(e) of this article, shall

be used. A test on an individual sample of milk that exceeds the previous test average (minimum of 4 samples to arrive at previous test average) by more than 0.2 % for any component will automatically trigger a retest.

(g) When a retest on an individual sample of milk does not exceed the maximum difference allowed in subsection (e) of this section the original test must be used as the basis for payment, and the original test will be reported on the original test sheet, with an explanation of the retest.

(h) When a retest on a sample of cream amounts to seventy-five hundredths of one percent (0.75%) or greater, the retest shall be used, unless the sample is deemed to be unsuitable for testing due to oiling off, churning, water in the sample, or other sample anomaly, in which case the application of the averaging procedures in section 525(e) of this article shall be used.

(i) The Department may check the accuracy and precision of licensed testers' work by unannounced inspections. The Department will review the work of licensed testers whenever a complaint is made regarding the accuracy and precision of their work.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921 and 34261.5, Food and Agricultural Code.

Section 513. Infrared Instrumentation.

The Department approves of the use of mid-infrared instruments that rapidly determine the percentages of the fat, protein, lactose and solids content of milk as outlined in the 17th Edition of Standard Methods for the Examination of Dairy Products, which is incorporated by reference, including all precalibration testing requirements and routine instrument performance checks, when such findings form the basis for payment for raw milk.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 32921, 34202, 34231, 34261.5, 35784, 38181, 38191-38213, Food and Agricultural Code.

Section 513.5 Operation of Infrared Instruments.

(a) The following shall govern the determination of milk components by Infrared (IR) instrumentation:

(1) Persons testing raw milk by means of IR instrumentation shall hold a tester's license for IR and work under the supervision of personnel also licensed for IR testing, and responsible for all aspects of component payment testing at the facility.

(2) Each day the IR instrument is used, a check (pilot) sample warmed according to section 15.121 of the 17th Edition of Standard Methods for the Examination of Dairy Products, which is incorporated by reference, with the temperature verified and recorded prior to testing, shall be analyzed at start-up and once every hour thereafter. The pilot sample can be a commercially prepared pilot sample, UHT whole milk, pasteurized whole milk, or raw milk or similar matrix. The pilot sample shall be handled, prepared, and tested in the same manner as producer payment samples. The pilot sample component values will be determined by averaging several instrument readings, after having cleaned and zeroed the instrument. The average instrument readings for each component will be used as the baseline to compare the daily start-up and hourly pilot samples. The results shall be recorded in the permanent log book, in accordance with subsection (a)(5). The component values on the pilot samples shall be less than or equal to 0.04% of the original base line values. If any component value on a pilot sample exceeds the original base line value by more than 0.04%, the instrument shall be cleaned and zeroed, and a fresh pilot sample shall be run. If any of the pilot sample components still deviate from the baseline values by more than 0.04% the instrument will be considered to be malfunctioning, and all payment samples analyzed since the last acceptable pilot sample shall have their results reported using the averaging procedures outlined in section 525(e) of this article. In the event of instrument malfunction further testing must be done by alternate official final action methods, or acceptable methods of comparable accuracy. If the laboratory cannot

perform the above methods, payment samples must be sent to another payment laboratory for analysis. The laboratory management shall submit a letter to the Department's Milk and Dairy Food Safety Branch identifying the alternate official final action methods and/or alternate laboratory that shall be used to analyze payment samples in the event of instrument malfunction, and update the letter as circumstances change.

(3) Samples of raw milk which are high in acidity, coagulated, or churned may not be tested by IR.

(4) If at any time the tester licensed to make milk component determinations by IR has reason to believe the results obtained are biased or inaccurate, all further testing must be done by alternate official final action methods listed in Food and Agricultural Code section 32921, or by acceptable methods of comparable accuracy, or the samples shall be tested by another payment laboratory until the bias is eliminated.

(5) The recommendations provided in the Instruction Manual of the manufacturer for calibration, sample preparation, operation, routine maintenance, daily instrument checks, and cleaning shall be followed, unless otherwise instructed in writing by a representative of the Department. A permanent log book shall be maintained that records the results of all pilot samples, as well as information pertaining to any adjustments made to the instrument (i.e. maintenance, calibration changes, daily instrument checks, and any other work done on the instrument). The log book shall be available for review by the Department upon request.

(6) The volume of the test portion shall be sufficient to make an original test and a retest. This volume may vary by instrument depending on the individual instrument volume uptake settings.

(7) The power input to the IR instrument shall be standardized by a constant voltage regulator.

(8) The IR instrument must be operated in an air-conditioned room where the temperature does not exceed 80°F.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Section 32921 and 34261.5, Food and Agricultural Code.

Section 514. Samples, Sampling and Weighing.

(a) Bulk milk and cream must be thoroughly mixed in accordance with the 17th Edition of Standard Methods for the Examination of Dairy Products, which is incorporated by reference, for at least five minutes before sampling, or longer as may be required to obtain a representative sample throughout the tank. Bulk milk tanks from which samples are taken must be equipped with power-driven mechanical devices which will thoroughly mix the milk or cream prior to sample collection. Such mechanical devices shall be of a type and installed in a manner approved by the Department. Samples shall be representative of the fat content of the product sampled. Sampling tubes and dippers that are badly dented, or leak, must not be used. Cylindrical shaped dippers, only, shall be used when samples are secured with dippers. The sampling devices shall be rinsed in the product to be sampled before any part of the product is transferred to the sample bottle. Sample bottles shall be filled away from the farm tank opening so that no milk is spilled back into the farm tank. Sample bottles shall be filled no more than three quarters full to permit proper mixing of the sample at the laboratory.

(b) Samples shall be marked with the date and the producer's name or patron number in a manner that will not erase.

(c) Weights must be read and recorded to the nearest half-pound graduation on the scales for cream, and the nearest one-pound graduation for milk or weights taken or measurements made in a manner and to an accuracy acceptable to the Sealer of Weights and Measures.

(d) At the time samples are being taken, licensee will be held responsible for operating the mechanical agitators in a manner that will assure a representative sample, and for securing a correct weight or measurement.

NOTE: Authority cited: Sections 407 and 34261.5, Food and Agricultural Code. Reference: Sections 32731, 32734, 34201, 34231, 34265, 34301, 35163, Food and Agricultural Code.

Section 515. Sample Bottles.

Milk and cream samples to be tested for payment purposes shall be collected and held in single use plastic vials or bottles made of plastics that are manufactured from known chemical content, which does not contain materials that migrate into the food which may adversely affect the composition or bacteriological quality of the product.

NOTE: Authority cited: Section 407, Food and Agricultural Code. Reference: Sections 34351, 35166, Food and Agricultural Code.

Section 516. Milk Preservatives.

For preserving milk samples in the laboratory for the determination of milk components, bronopol (0.02 - 0.06 percent by weight of the sample), bronopol with a yeast and mold inhibitor (0.02 - 0.06 percent by weight of the sample), or potassium dichromate (0.1 percent maximum by weight of the sample) may be used. A request for approval for the use of other preservatives not specified in this section, must be submitted in writing to the Department prior to use. Any milk sample tested within 3 days after the sample is collected need not be preserved.

NOTE: Authority cited: Sections 407 and 34231, Food and Agricultural Code. Reference: Section 34231(b), Food and Agricultural Code.

Section 517. Storage and Testing of Samples.

(a) The management of each facility that tests milk or cream for basis for payment shall designate one licensed tester to be the responsible party (designee) for ensuring that the samples are received, stored, handled, prepared, tested, and recorded as outlined in sections 499, 509, 510, 511, 512, 512.1, 512.2, 513, 513.5, 515, 516, 517, and 525 of Title 3 of the California Code of Regulations, and ensure that all personnel who test samples for payment are licensed testers. The designee shall also be responsible for ensuring that the daily calibration checks are performed and recorded properly, and that the instrument is maintained according to the manufacturer's suggested guidelines. Management shall, within at least 24 hours, notify the Department by telephone or electronic mail when there is a personnel change with regard to the designee, and make certain that at all times there is a trained backup person available to take over the designee's role.

(b) Each person purchasing, receiving, or selling milk or cream on the basis of milk components shall provide a refrigerator maintained at a temperature between 0° and 4.4°C. in which licensed weighers, samplers and testers shall keep all samples taken or maintained during sampling and holding periods. All such samples shall be kept in a secure place in the refrigerator which shall be constructed and maintained in a manner acceptable to the Department. Written procedures shall be in place to ensure the security of the samples at all times. A copy of the written procedures shall be submitted to the Department at the time the laboratory requests approval for payment testing, whenever procedures or methods are changed, or when requested by the Department.

(c) Samples of all milk and cream tested at a payment laboratory shall be maintained for a period of at least 72 hours after testing. The laboratory designee shall be personally responsible for their safekeeping.

NOTE: Authority cited: Sections 407 and 34231, Food and Agricultural Code. Reference: Sections 32921, 34231, 34261, 34261.5, 34262, 34263, 34264 and 34265, Food and Agricultural Code.

Section 525. Keeping Records of Tests.

(a) All milk and cream test record sheets shall be permanently identified with the name or number of the concern for whom the tests are made. Daily test records must be available at

the laboratory in hard copy for no less than 30 days, in addition to any back up copies of the data. After 30 days the records may be archived to any type of removable storage media where they are to be kept for a minimum of two years.

(b) Each test record sheet shall be authenticated by the full signature of the licensed tester, marked with the complete date on which the tests were made, and the date the sample was taken. The name and address of the person, firm, company, or association purchasing, receiving, or selling the product that has been tested shall appear on the test record sheets. The name and address of the testing laboratory shall appear on the test record sheet. If an infrared instrument is used, the serial number of the instrument used to test the samples shall appear on each test record sheet.

(c) Whenever a change in the records, while still in possession of the tester, is necessary by the reason of accident or failure to properly record the test, or when a retest is made, and the retest is sufficiently different from the first test, as specified in section 512.2 (e), the original entry on the records shall be marked out with a single stroke of the pen, without obliterating the figures, and the correction or retest noted immediately adjacent to the original entry. The change shall be identified by the initials of the tester, which are to be written on the test record sheet immediately adjacent to the correction. Whenever, for any such cause, a change in the records is necessary, a record of such change shall be made by the licensed tester on a retest sheet. Any changes or corrections occasioned by these retests are to be made by the licensed tester only, and the original retest sheet must be permanently fastened to the original test record sheet. The name and address of the person, firm, company, or association purchasing, receiving, or selling the product retested must be entered on all retest sheets. Two dates must appear on all retest sheets--one showing the date the retest was made and the other showing the date that the milk or cream was first tested. All retest sheets must be made with ink and be signed with the full name of the tester. All retests must be accompanied by the patron's name or number in order to determine to whom the sample retested belonged.

(d) The original test record sheets shall be delivered to the management of the concern for whom the tests are made immediately upon completion of the tests on the day's samples.

(e) When sample bottles leak or they are lost, or the contents are partly spilled, or the bottles are broken or cracked, or for any other reason the sample is not representative, notation of occurrence must be made on the test record sheet by the licensed tester. In such cases an averaged test must be given to the patron, based on the average of the four immediately preceding tests if the sample was a milk sample. In the case of a sample of cream, the averaged amount of fat shall be based on the average of four deliveries of cream from the same patron, immediately preceding the day for which the fat is averaged.

(f) Weights or measurements must not be changed without approval of the Department, except where obvious errors have been made by the licensed sampler and weigher. An average weight or measurement based on the four immediately preceding recorded weights, whenever available, shall be used if the actual correct weight cannot be determined.

(g) Explanations as to averaged tests on milk and averaged amounts of fat or cream, and averages in weights or measurements must appear on the original patron statement. All such changes must be identified with the name or initials of the plant manager or the person responsible for these records.

NOTE: Authority cited: Sections 407 and 34231, Food and Agricultural Code. Reference: Section 34231(b), Food and Agricultural Code.

Article 14.5. Nonfat Milk Solids Testing and Reporting [repealed]

Article 14.6. Testing of Raw Milk for Butterfat by Light Transmission [repealed]

**Article 14.7. Testing of Raw Milk for Butterfat and Other Milk Constituents by Infrared
Light Transmission**
[repealed]

Article 14.8. Third Party Testing

Section 551. Definitions.

For the purposes of this Article, the term “third party” means a commercial laboratory or any laboratory approved by the Department having no vested interest in the laboratory findings of specific analyses.

NOTE: Authority cited: Sections 407 and 34231, Food and Agricultural Code. Reference: Sections 34201, 34231, Food and Agricultural Code.

Section 552. Interplant Bulk Sales of Commingled Milk.

(a) For bulk sales of commingled milk from members' ranches to a distributor when such deliveries are made by a non-profit cooperative association or its agent, the non-profit cooperative association shall be deemed a single producer subject to the provisions of section 34231(b) and (c) of the Food and Agricultural Code.

(b) For direct sales from individual members' ranches when the milk is picked up by a distributor or his agent, the non-profit cooperative members shall be considered an individual producer subject to the provisions of section 34231(b) and (c).

NOTE: Authority cited: Sections 407 and 34231, Food and Agricultural Code. Reference: Sections 34231 and 34301, Food and Agricultural Code.

Section 553. Procedures for Designation.

(a) A designation of a laboratory or laboratories by the Department will be based upon a combination of the following criteria:

- (1) Accuracy of analytical procedure.
- (2) Capability of laboratory or laboratories in terms of time and frequency of analyses.
- (3) Lowest cost of service to be performed.

(b) Whenever there is a substantial change in circumstances on which designation was predicated, the Department shall be advised by the parties; in such an event, the Department will determine whether a change in designation shall be made.

(c) When, as a result of prescribed written application under provision of section 34231(c) of the Food and Agricultural Code, the Department designates third party testing, such designation shall be deemed operative for the distributor and for all producers shipping to the milk plant affected.

NOTE: Authority cited: Section 407 and 34231, Food and Agricultural Code. Reference: Sections 34921, 34233 and 34301, Food and Agricultural Code.

Section 554. Resolution of Test Variations.

In the absence of mutual agreement or designation provided for in subsection (c) of section 34231 of the Food and Agricultural Code, analyses of milk fat and non-fat milk solids made on a lot or lots of milk by a licensed tester(s) representing the seller and a licensed tester(s) representing the buyer, any differences in findings will be resolved by using the findings of the laboratory utilizing the most accurate analytical procedure. When both testers use the same procedure, an average of the two tests will form the basis for resolution of the differences. If one or both samples are available, additional analyses shall be made.

NOTE: Authority cited: Sections 407 and 34231, Food and Agricultural Code. Reference: Section 34301, Food and Agricultural Code.

Article 21. Milk Inspection Services

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Section 604.1. Confirmation of Compliance Testing on Finished Fluid Milk Products.

(a) When analyses of finished fluid milk products are made by mid-infrared instrumentation, the Department shall, before any action for failure to comply with the standards of composition established by sections 35784, 38181, 38191 and 38211 of the Food and Agricultural Code, have analyses confirmed by the methods listed in this section. The AOAC Official Method numbers indicated below refer to methods outlined in the 18th Edition of the Official Methods of Analysis of the Association of Official Analytical Chemists International, which is incorporated by reference.

(1) Fat in Milk, Modified Mojonnier Ether Extraction, AOAC Official Method 989.05

(2) Solids (Total) in Milk, By Direct Forced Air Oven Drying, AOAC Official Method 990.20

(3) Solids-Not-Fat in Milk, AOAC Official Method 990.21

(b) To determine compliance with legal standards of composition, the final analytical results (lab value) from confirmation methods listed in this section shall have an expanded uncertainty value applied as follows:

(1) Fat results on milk, reduced fat milk, lowfat milk and nonfat milk will have an expanded uncertainty value of ± 0.03 percent fat applied to the lab value.

(2) Total Milk Solids (TS) results on milk will have an expanded uncertainty value of ± 0.07 percent solids applied to the lab value.

(3) Solids Not Fat (SNF) results on milk, reduced fat milk, lowfat milk and nonfat milk, will have an expanded uncertainty value of ± 0.07 percent solids applied to the lab value.

(c) Written complaints sent to the Department objecting to a final analytical result used to determine compliance with legal standards of composition shall be kept on file with a copy of that final analytical result for two years.

NOTE: Authority cited: Sections 407, 34231 and 34261.5, Food and Agricultural Code.
Reference: Sections 34202, 34261, 34262, 34263, 34264, 34265, 34301, Food and Agricultural Code.

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